

**ABSTRACT OF THE DISCLOSURE**

A method for in situ monitoring of particles generated by a reaction by-product film peeling from an interior wall of a reaction chamber of a semiconductor fabrication apparatus to determine reaction chamber condition. The method includes the steps of: exciting the particles to emit light; and comparing an intensity value of the light, measured at a selected time during a predetermined time period, to a predetermined light intensity threshold value. If the intensity value of the light measured at the selected time is above the predetermined light intensity threshold value, the chamber condition is abnormal. If the intensity value of the light is equal to or below the predetermined light intensity threshold value, the chamber condition is normal.